



Climate Technology Transfer supported through Linked Data

A Proof of Concept for The Climate Technology Centre and Network (CTCN)

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Martin Kaltenböck (SWC) | m.kaltenboeck@semantic-web.at

Agenda & Speakers



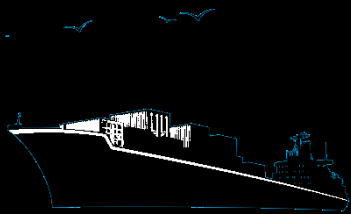
- **Short Introduction: DNV.GL & CTCN**
- **The CTCN Matchmaking Assistant (a PoC)**



- **The Approach & the Technical Solution behind**
- **Similar Business Use Cases**

Standards, testing, inspection, certification and technical advice

MARITIME



OIL & GAS



ENERGY



BUSINESS ASSURANCE



SOFTWARE



CYBERNETICS

RESEARCH & INNOVATION



Strategic research and innovation programmes

OIL & GAS AND ENERGY SYSTEMS

- Offshore safety
- Safety and reliability of the subsea factory
- Energy foresight

ARCTIC TECHNOLOGY

- Arctic offshore structures
- Arctic ship structures
- Arctic oil spill preparedness

MATERIALS

- Materials in energy storage
- Risk management of corrodible systems
- Advanced materials and sensors

INFORMATION TECHNOLOGY

- Autonomous systems
- Big data analytics of sensor data

POWER SYSTEMS ELECTRIFICATION

- Super grid
- Smart grid
- Storage

MARITIME TRANSPORT

- Safer shipping
- Greener shipping
- Smarter shipping

CLIMATE CHANGE

- Adaptation
- Mitigation

HEALTHCARE

- Patient safety

LOW CARBON FUTURE

- Renewable energy
- Green economy
- Transformation process

DNV GL strategic partnership with CTCN

■ What is CTCN?

- UN operational body under UNFCCC for combating climate change
- Focus on developing countries around the world
- Requests for assistance from developing countries are screened and routed to the best partner to provide the assistance
- Focus is on climate technologies: [org/hard/software](http://ctc-n.org/hard/software)



■ Areas of collaboration:

- Knowledge management
- Private sector engagement in climate smart solutions
- Monitoring and evaluation



CTCN Matchmaking Assistant

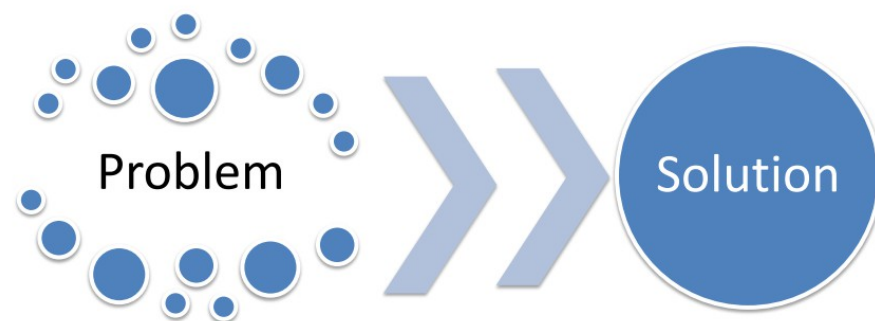
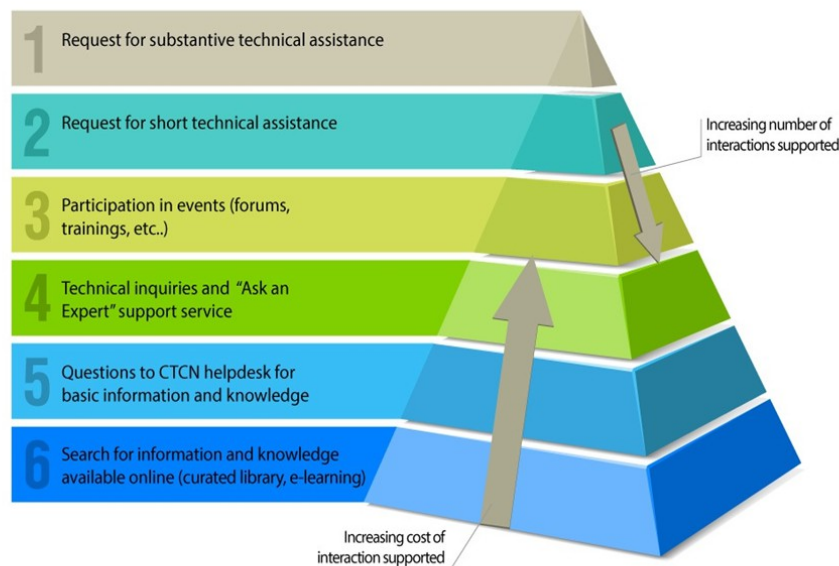
Proof of Concept Demonstrator



Introduction

- **CTCN provides a pyramid of services** including response plans to **requests for technical assistance** from so-called National Designated Entities (NDEs)
- **Matching** of requests for technical assistance with available **consortium and network partners, solutions** and **technology types** is currently a manual process
- **Amount of requests is expected to increase** substantially in the future, as is the volume of network partners
- **To cope with anticipated volumes**, a web-based system can help recommend partners, solutions and technology types with technical assistance requests

Matchmaking at the heart of CTCN service provision



Help to find the right solutions to developing countries' needs

Key question

- Is it possible to automatically match incoming requests for assistance with available expertise throughout the CTCN expertise pool, represented by a growing number of network member organisations?
- If so, this would then allow CTCN to provide solutions to developing countries' needs, in a scalable, yet high-quality way.

Partners in PoC undertaking

- CTCN
- DNV GL
- Semantic Web Company
- REEEP



Results – CTCN Matchmaking Assistant – Home Page

CTCN Matchmaking Assistant

Proof of Concept Demonstrator

Home

Recommender

Search

Welcome

Matching developing countries climate related technical assistance requests with potential climate technology solutions offered by the CTCN consortium and network is a key feature of the services provided by the CTCN.

This demonstrator offers innovative and complementary ways to assist the CTCN in its efforts to provide the right technical assistance to countries.

Through analysing both countries' requests as well as the capabilities of solution providers, the demonstrator suggests potential matches between the two. The analysis is based on an enhanced version of the [Climate Tagger](#) thesaurus and intelligent web technology.



Contact: [Eelco Kruizinga](#), CTCN DNV GL strategic partnership

PoC Use Case 1 - Recommender

[Home](#) [Recommender](#) [Search](#)

Recommender

FILE UPLOAD

Select an uploaded file *
CTCN Request MUS-1.pdf
Download file "CTCN Request MUS-1.pdf"

Choose a new file *
[Choose File](#) no file selected

Analyze text

Content highlights

Consortium Partner documents

Network Partner documents

Relevant Initiatives

Organisation(s)

Organisation	Abbreviation	Type
Deutsche Gesellschaft für internationale Zusammenarbeit	GIZ	Consortium Partner
National Renewable Energy Laboratory	NREL	Consortium Partner
Bariloche Foundation	BARILOCHE	Consortium Partner
Energy Research Centre of the Netherlands	ECN	Consortium Partner
The Energy and Resources Institute	TERI	Consortium Partner
Global Carbon Capture and Storage Institute	Global CCS	Network Partner

Concept(s)

Concept	Score
energy	<div></div>
greenhouse gas emissions	<div></div>
renewable energies	<div></div>
climate change	<div></div>
projects	<div></div>

On-line
Matchmaking
Assistant
takes TA Request
as input

And suggests
organisations
that have the
expertise
to help

On the basis
of an extracted
'fingerprint'
of the TA
Request

PoC Use Case 1 – Recommender Content Highlights = Fingerprint

Download file "CTCN Request MUS-1.pdf"

Choose a new file *

Choose File no file selected

Analyze text

Content highlights

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Network Partner documents

Relevant Initiatives

Organisation(s)

Organisation	Abbreviation	Type
Bariloche Foundation	BARILOCHE	Consortium Partner
Energy Research Centre of the Netherlands	ECN	Consortium Partner
Deutsche Gesellschaft für internationale Zusammenarbeit	GIZ	Consortium Partner
National Renewable Energy Laboratory	NREL	Consortium Partner
The Energy and Resources Institute	TERI	Consortium Partner
Centro Nacional de Energia Renovables	CENER	Network Partner
Centro Internacional de Agricultura Tropical	CIAT	Network Partner
CVDT Consulting (Beijing) Ltd	CVDT	Network Partner
Burleson Institute Inc.	BURLESON	Network Partner
Climate and Development Knowledge Network	CDKN	Network Partner

Concept(s)

Concept	Score
energy	<div><div></div></div>
greenhouse gas emissions	<div><div></div></div>
renewable energies	<div><div></div></div>
climate change	<div><div></div></div>
projects	<div><div></div></div>
carbon dioxide	<div><div></div></div>
electricity generation	<div><div></div></div>
energy sector	<div><div></div></div>

PoC Use Case 1 – Background information on Consortium Partners Recommended

CTCN Matchmaking Assistant

Proof of Concept Demonstrator

Home

Recommender

Search

Recommender

FILE UPLOAD

Select an uploaded file *

CTCN Request MUS-1.pdf

Download file "CTCN Request MUS-1.pdf"

Choose a new file *

Choose File

no file selected

Analyze text

Content highlights

Consortium Partner documents

Network Partner documents

Relevant Initiatives

Document(s)

Diapositive 1 - GIZ

Technical Expertise within the Consortium: Deutsche Gesellschaft für internationale Zusammenarbeit - GIZ Climate Technology Centre and Network CTCN
The challenge here is to present our GIZ strength comprehensively in 5 min. We have a staff of more than 20 000 employees world wide Our yearly turn ...

Diapositive 1 - NREL

Technical Expertise Within the Consortium: Ron Benioff & Bethany Speer National Renewable Energy Laboratory Climate Technology Centre and Network CTCN NREL – Over 2000 Professionals Advancing Global Clean Energy Development and Deployment Energy Efficiency Renewable Energy Systems Integration ...

Diapositive 1 - BARILOCHE

Climate Technology Centre and Network CTCN Technical Expertise Within the Consortium: Daniel Hugo Bouille Bariloche Foundation Climate Technology Centre and Network CTCN Key Strengths BE can collaborate in the 3 key functions of the CTCN. Specially in L&C, our strengths are: Advice and

PoC Use Case 1 – Background information on Network Partners Recommended

Home

Recommender

Search

Recommender

FILE UPLOAD

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Download file "CTCN Request MUS-1.pdf"

Choose a new file *

Choose File no file selected

Analyze text

Content highlights

Consortium Partner documents

Network Partner documents

Relevant Initiatives

Document(s)

Microsoft Word - 13 May FS BM CENER_CV_Fernando Sánchez Sudon_en.doc - CENER

CURRICULUM VITAE (CV) FOR PROPOSED INTERNATIONAL OR NATIONAL EXPERTS Fernando Sánchez Page 1 Fernando Sánchez Chief Technology Officer National Renewable Energy Centre of Spain (CENER) E-mail: fsanchez@cener.com Phone: +34 948 25 28 00 Name of firm: National Renewable ...

Microsoft Word - CENERs expertise projects_application ref number N0034.docx - CENER

Research projects of CENER 1 Project title: Supporting a Sustainable European Bioenergy Trade Strategy Acronym: BioTrade2020plus Area: biomass Duration: 2014-2017 Framework: European Project – Intelligent Energy for Europe ...

PoC Use Case 1 – Background information on relevant initiatives from Case Studies and existing projects

CTCN Matchmaking Assistant

Proof of Concept Demonstrator

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Recommender

Search

Recommender

FILE UPLOAD

Select an uploaded file *

CTCN Request MUS-1.pdf

Download file "CTCN Request MUS-1.pdf"

Choose a new file *

Choose File

no file selected

Analyze text

Content highlights

Consortium Partner documents

Network Partner documents

Relevant Initiatives

Document(s)

[Microsoft Word - ANNEX2-Proposal for the Construction of Low Energy Buildings in China.doc](#)

1 Proposal for Construction of Low Energy Buildings in China MSc. Hu Runqing June 2007 WORKING DOCUMENT PREPARED IN COMPLIANCE WITH THE AGREEMENT SIGNED BY AND BETWEEN CNERCHS AND THE RENEWABLE ENERGY AND ENERGY EFFICIENCY PARTNERSHIP (REEEP) ...

[PDCSNL062127 report standards](#)

Ecofys Netherlands BV P.O. Box 8408 NL-3503 RK Utrecht Kanaalweg 16-G NL-3526 KL Utrecht The Netherlands W: www.ecofys.com T: +31 (0)30 280 83 00 F: +31 (0)30 280 83 01 E: info@ecofys.com -Confidential- Drs ...

[PDCSNL062127 summary report case studies](#)

SUMMARY OF CASE STUDIES Drs. B.G.C. van der Ree Drs. J.C. Jol Drs. K. Klomp April 2007 PDCSNL062127 WORKING DOCUMENT PREPARED IN COMPLIANCE WITH THE AGREEMENT SIGNED BY AND BETWEEN CNERCHS AND THE RENEWABLE ENERGY AND ENERGY EFFICIENCY

PoC Use Case 2 – Faceted Search

CTCN Matchmaking Assistant

Proof of Concept Demonstrator

Home Recommender Search

Search

reset

search

Thu, 06/18/2015 - 18:26 |

Microsoft Word - REEEP Final - aug 17.docx

Design and Establish Risk Mitigation Mechanism in India Draft Final Report PricewaterhouseCoopers Pvt. Ltd.PricewaterhouseCoopers Pvt. Ltd.PricewaterhouseCoopers Pvt. Ltd. July 2010 A pilot project to ascertain...

Tags:

assessments, assumptions, awareness creation, bioenergy cogeneration, biomass, capital subsidies, carbon footprint, Centre, Chandigarh, Clean Development Mechanism, ...

[more like this](#)

Thu, 06/18/2015 - 17:49 | KNCPC

KNCPC/N0049 KNCPC/Reference materials.zip

3. KITECH Annual Report 2013.pdf 1. KNCPC Brochure 2014.pdf Korea National Cleaner Production Center Hanshin Intervalley 24 East B/D 18F, 707-34, Yeoksam-dong, Gangnam-gu, Seoul, Korea. Tel. +08-2-2183-1500 Fax. +08-2-2183-1549 <http://www.kncpc.or.kr> - Dissemination of...

Tags:

annual reports, assessments, benchmarking, carbon, carbon tax, carbon dioxide, carbon footprint, carbon tax, chemicals sector processes, cleaning, ...

[more like this](#)

ORGANISATIONS

☒ Network Partners (323)

☐ Consortium Partners (94)

CLIMATE GLOSSARY

CLIMATE TECHNOLOGIES

☒ Mitigation sectors (323)

☐ Adaptation sectors (291)

☐ Cross cutting approaches (177)

ENERGY EFFICIENCY

RENEWABLE ENERGY

GEOGRAPHIC SCOPE

☒ Asia (323)

☐ Africa (271)

☐ Latin America and the Caribbean (253)

☐ Europe (252)

☐ North America (177)

☐ Oceania (147)

☐ Antarctica (3)

reset

The user can filter through different areas of the expert vetted concepts to display documents in the pool of content with those extracted concepts

PoC Use Case 2 – Faceted Search

CTCN Matchmaking Assistant

Proof of Concept Demonstrator

[Home](#)[Recommender](#)[Search](#)

Search

Kingdom of Bahrain
Ukraine
rain-fed agriculture
rainfall pattern
Rain
trainers
Rail transport
trains
tropical rainforests
drainage

[more like this](#)

Thu, 06/18/2015 - 17:33 | CiC Kenya

[CiC Kenya/N0016 CiC Kenya/New folder/CVs and Documents \(4\).zip](#)

CVs/Curriculum Vitae - Izael Pereira Da Silva (1).pdf Izael Pereira Da Silva, Curriculum Vitae Page 1 of 8 CURRICULUM VITAE Professor Izael Pereira Da Silva Personal Details Date of Birth: 05.05.1960 Gender: Male Marital Status: Single Nationality: Brazilian...

☒ Consortium Partners (114)☐ Network Partners (83)

CLIMATE GLOSSARY

CLIMATE TECHNOLOGIES

☒ Adaptation sectors (114)☐ Mitigation sectors (114)☐ Cross cutting approaches (73)

ENERGY EFFICIENCY

RENEWABLE ENERGY

GEOGRAPHIC SCOPE

☒ Africa (114)☐ Latin America and the Caribbean (104)☐ Asia (101)☐ Europe (85)☐ North America (64)☐ Oceania (47)[reset](#)

The user can input key concepts into the open search field and the system recommends concepts from the thesaurus

CTCN specific adaptations to wider climate tagger thesaurus

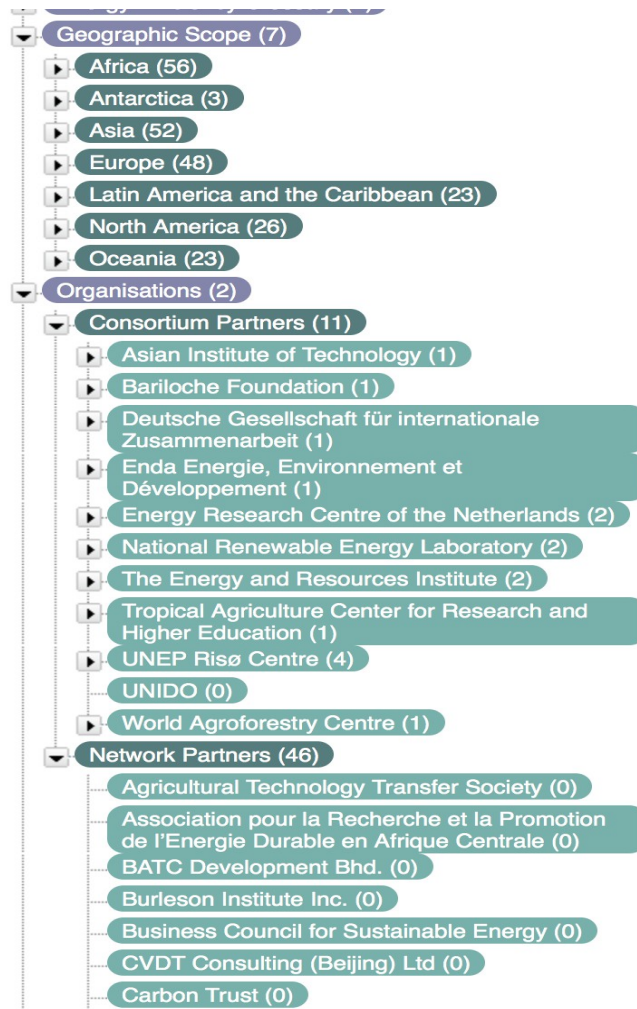
The screenshot displays the 'CTCN PoC Development Thesaurus from Climate Tagger' interface. On the left, a hierarchical tree structure shows the following categories and their counts:

- Climate Compatible Development Glossary (10)
- Climate Technologies (4)
 - Adaptation sectors (8)
 - Early Warning and Environmental Assessment (0)
 - agriculture sector (8)
 - coastal zones (9)
 - forestry sector (3)
 - human health (5)
 - infrastructure, transport and urban design (5)
 - marine and fisheries (0)
 - water sector (1)
 - Cross cutting approaches (4)
 - community based (1)
 - disaster risk reduction (2)
 - ecosystems and biodiversity (9)
 - gender (0)
 - Cross cutting enablers (3)
 - communications and awareness (0)
 - economics and financial decision-making (0)
 - governance and planning (0)
 - Mitigation sectors (7)
 - agriculture sector (8)
 - energy supply (2)
 - energy use (0)
 - forestry sector (3)
 - industry sector (1)
 - infrastructure, transport and urban design (5)
 - waste management (7)

On the right, the 'Metadata & Statistics' panel is active, showing the following details for the selected concept:

- Title:** CTCN PoC Development Thesaurus from Climate Tagger (en, de, es, fr, pt)
- Subject:** technologies, specifications, parameters and concepts concerning climate (en, de, es, fr, pt); compatible development
- Description:** thesaurus on climate change and renewable energy, energy efficiency and (en, de, es, fr); climate compatible development

CTCN specific adaptations to the expert-vetted climate tagger thesaurus



CTCN PoC Development Thesaurus from Climate Tagger

1DCE117E-64A8-0001-15A0-142013601ABF

Metadata & Statistics Concepts Triples SPARQL Autopopulate Visualization

Metadata & Statistics ADMS

Title

CTCN PoC Development Thesaurus from Climate Tagger

en

+

+

+

+

de

es

fr

pt

Language

Default

Display

Subject

technologies, specifications, parameters and concepts concerning climate

en

compatible development

+

+

+

+

de

es

fr

pt

Statistics

Class

Number

Number

Number

Relationship

Number

Number

Relationship

Number

Number

Relationship

Number

Number

Relationship

Number

Number

Description

thesaurus on climate change and renewable energy, energy efficiency and

en

climate compatible development

+

+

+

+

de

es

fr

pt

CTCN Consortium Partner Depth of info example 1

Organisations (2)

Consortium Partners (11)

Asian Institute of Technology (1)

Gopi Krishna (0)

Bariloche Foundation (1)

Deutsche Gesellschaft für internationale Zusammenarbeit (1)

Enda Energie, Environnement et Développement (1)

Energy Research Centre of the Netherlands (2)

National Renewable Energy Laboratory (2)

The Energy and Resources Institute (2)

Tropical Agriculture Center for Research and Higher Education (1)

UNEP Risø Centre (4)

UNIDO (0)

World Agroforestry Centre (1)


Network Partners (46)

Renewable Energy Glossary (11)

ists


KOS-XL Label

SKOS SKOS-XL +

 Relations



Broader Concepts

[Consortium Partners](#)





Narrower Concepts


[Gopi Krishna](#)


 


Related Concepts


 [research and development](#)


 [climate change mitigation](#)

 [capacity building](#)

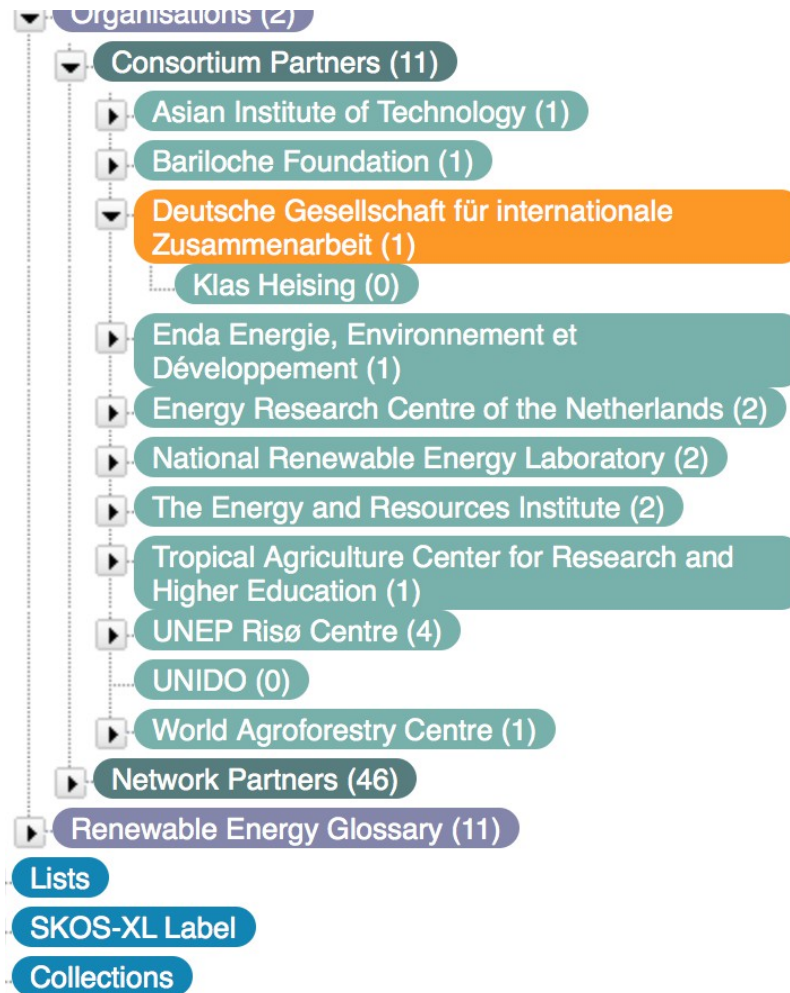
 [climate change adaptation](#)

 [Asia](#)

 [needs assessments](#)



CTCN Consortium Partner Depth of info example 2



- Related concepts
- ⊗ [private adaptation costs](#)
 - ⊗ [energy efficiency](#)
 - ⊗ [urban mobility](#)
 - ⊗ [disaster risk management](#)
 - ⊗ [fluorinated gases](#)
 - ⊗ [energy efficient transport](#)
 - ⊗ [biodiversity](#)
 - ⊗ [agriculture](#)
 - ⊗ [forestry](#)
 - ⊗ [co-benefits](#)
 - ⊗ [coastal zones](#)
 - ⊗ [energy access](#)
 - ⊗ [climate change mitigation](#)
 - ⊗ [climate change adaptation](#)
 - ⊗ [soil management](#)
 - ⊗ [access to water](#)
 - ⊗ [REDD plus](#)
 - ⊗ [mitigation co-benefits](#)
 - ⊗ [ozone layer depletion](#)
 - ⊗ [adaptation co-benefits](#)
 - ⊗

User Acceptance Testing

- The agreed **benchmark for success was the positive feedback from the Climate Technology Managers (CTMs)**
 - Will the Matchmaking Assistant help facilitate your work?
 - Do you support this development based on your user testing?
 - Can you see the potential in the system based on a live demonstration, hands on testing, being able to provide feedback and seeing the speed at which the developers can facilitate requested changes?
- **The answer across the board was YES**

Key Future Development and Opportunities

- **A public facing user interface** to provide recommendations for technology types and solutions to end users who may find what they need and not submit a request for TA
- Actively crawl pre-determined sources to **proactively gather on-line information for knowledge base and contextual case studies, solutions**, the scope to be finalized in coming discussions
- Use the power of the system as framework to **develop new protocols for on-boarding new network partners** in future
- Further development of functionality – **ranking, geographic expertise, balancing selection**
- **Further customization of search facets and user interface** for CTCN CTMs – i.e. order of displayed sectors, information about partners
- Development and integration of **technology types and solutions into existing Climate Tagger Thesaurus**

Development of a 'climate problem-language' and inference via thesaurus relations

Outlook and future CTCN use cases?

- Front end user interface to search for known solutions and technology types before submitting a request to CTCN open to the public
- Advanced **Semantic Search**
- CTCN **Technology Pages**
- **News Aggregation** and / or Media Monitoring Services
- CTCN **Glossary** Service
- Use **Recommender Services** for Climate Technology from Climate Tagger
- Enable **Personalization** Services
- Expand the use of **Relations** in the Climate Tagger Thesaurus relating partners to specific regions, technologies, expertise utilizing existing technology
- **Multiple languages** such as French, Spanish, Portuguese and German
 - can develop further languages in the thesaurus in future

Semantic Web Company



SWC was founded 2001, head-quartered in Vienna



25 experts in linked data technologies



Product: PoolParty Semantic Suite (launched 2009)



Serving customers from all over the world



EU- & US-based consulting services

Portfolio & Core Product



Taxonomy & Thesaurus Management

Build your knowledge foundation



Text Mining & Entity Extraction

Profit from unstructured data



Ontology Management

Manage your business complexity



Concept Tagging

Structure your digital assets



Data Integration

Interlink your data semi-automatically



Linked Data Management

Get ready for non-relational data



Semantic Search

Stop searching, start finding



Recommender System

Personalize your user experience



Analytics & Visualization

Recognize insights immediately



PoolParty is a world-class semantic technology suite that offers sharply focused solutions to your knowledge organization and content business.

PoolParty Semantic Suite

<http://www.poolparty.biz>

Customers & Partners

Finance / Automotive / Publisher / Health Care / Public Administration / Energy / Education

Some of our Customers We all have one goal in mind: Make machines smart enough so that they can help us to find those needles in the haystack, which are really relevant to us.

- Credit Suisse
- Boehringer Ingelheim
- Roche
- Wolters Kluwer
- BMJ Publishing Group
- Red Bull Media House
- Canadian Broadcasting Corporation (CBC)
- Pearson
- Council of the EU
- DG Environment, EC
- Healthdirect Australia
- Ministry of Finance (Austria)
- World Bank Group
- Inter-American Development Bank (IADB)
- International Atomic Energy Agency (IAEA)
- Buildings Performance Institute Europe (BPIE)
- Renewable Energy & Energy Efficiency P (REEEP)
- Global Buildings Performance Network (GBPN)
- American Physical Society
- Education Services Australia (ESA)
- Norwegian Directorate of Immigration
- Australian National Data Service

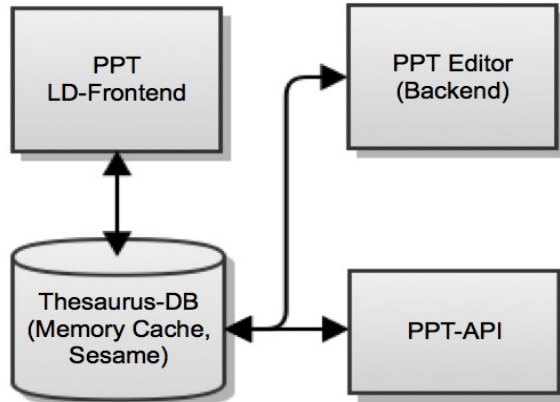
Selected Partners

- EBCONT
- EPAM Systems
- iQuest
- PwC
- Tenforce
- OpenLink Software
- Ontotext
- MarkLogic
- Gravity Zero
- Altotech
- Wolters Kluwer
- Taxonomy Strategies
- Taxonic
- The Green Land
- Linked Data Factory
- Fraunhofer (IAIS)
- University of Leipzig (INFAI)
- The Open Data Institute (ODI)



PoolParty Semantic Integrator

PoolParty Thesaurus Server



PoolParty Extractor

PPX-API

PowerTagging integrations

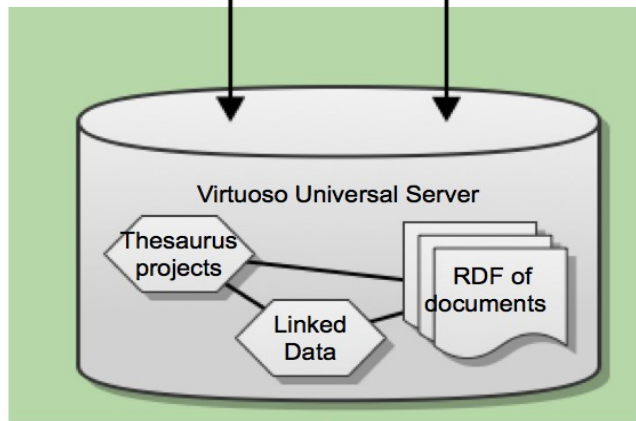
SharePoint

CONFLUENCE



WordPress

Your documents and CMS



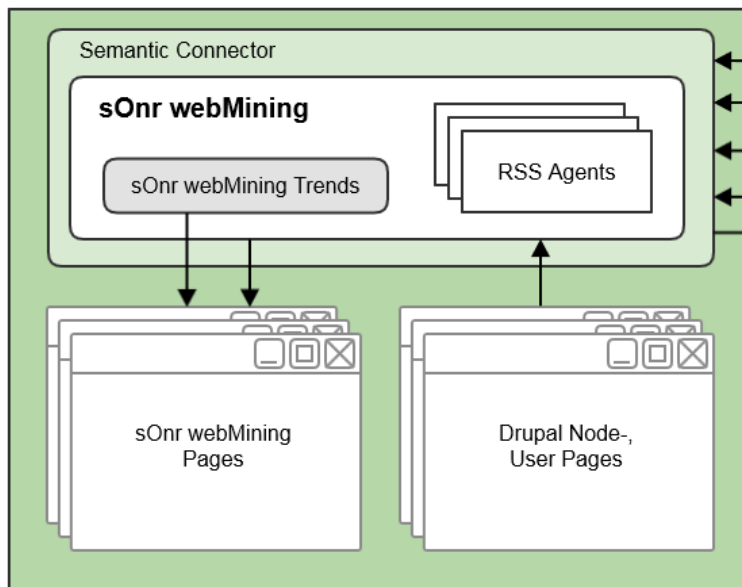
Enrichment/Creation of Semantic Enhanced Application via integration of semantic enhanced data/content through provided APIs and SPARQL endpoints

Semantically Enhanced Applications

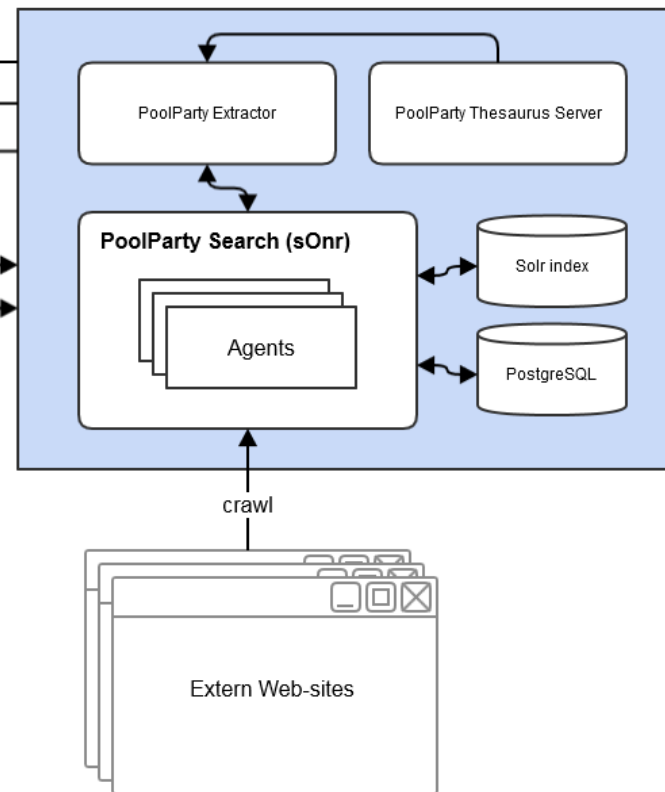
Technology behind the Solution



Drupal System



PoolParty Server



Similar Use Cases

Step 1

Climate Tagger is installed for use with unstructured content within databases, websites or document bundles from anywhere in the world in English, French, Spanish, Portuguese and German.



Step 2

Climate Tagger scans the unstructured information and identifies specific terms and concepts held within the sources covering multiple sectors relevant to climate compatible development.

Step 3

Climate Tagger "tags" the content based on suggestions from the expansive Climate Tagger Thesaurus, categorising and linking any resources connected to the system and making them searchable online.



ADDED FUNCTIONALITY VIA THE ENHANCED CLIMATE TAGGER API



Geo-Tagging

With the added functionality provided by the Climate Tagger API, users can connect content and concepts with geographic locations.



Enriching Content

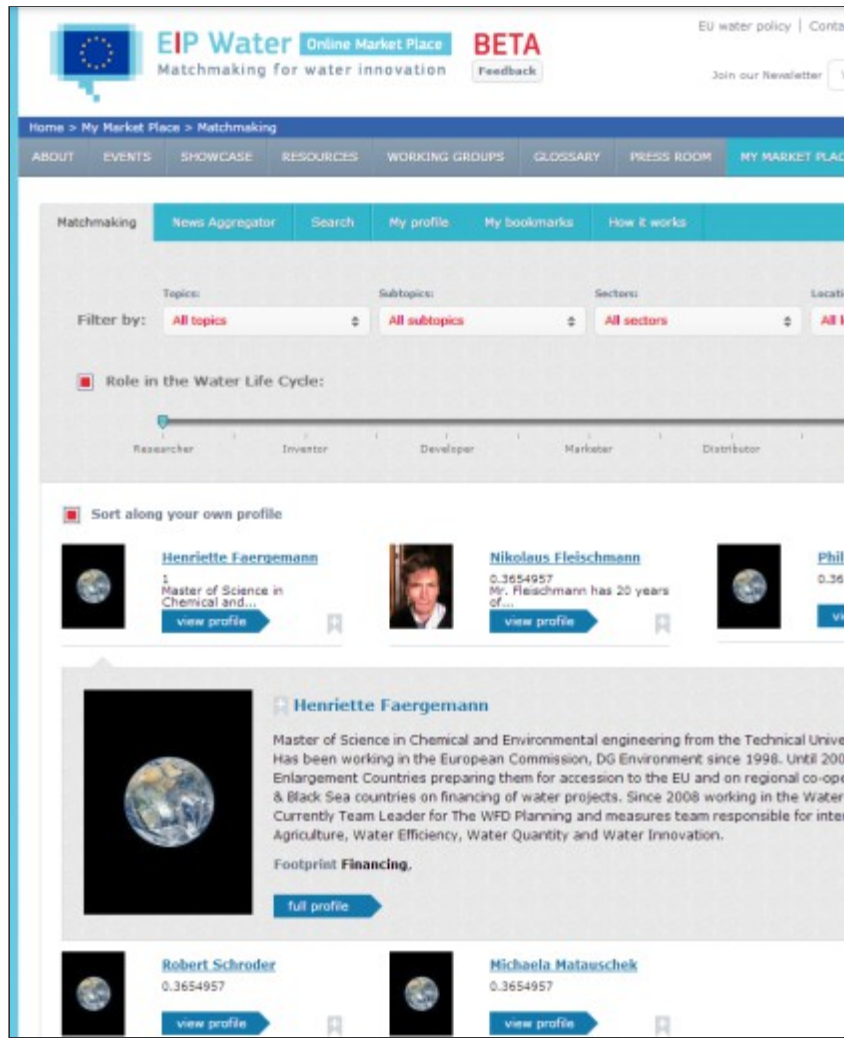
Climate Tagger can also be used to enrich content, adding related information based on the extracted concepts, including expanded definitions, translations and other linked terms.



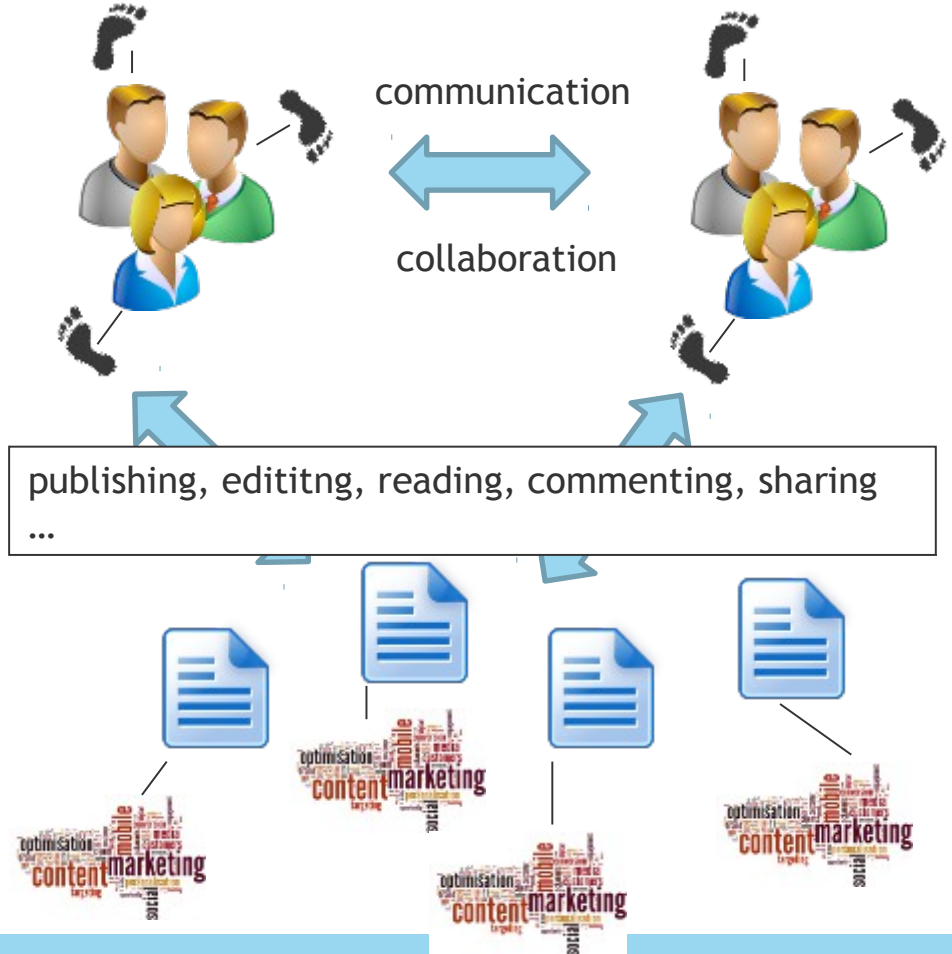
Content Pool

Climate Tagger allows organizations to connect their data and information resources to the Climate Tagger Content Pool, helping users discover underappreciated, unknown and newly made connections between knowledge resources from multiple sources around the world.

Similar Use Cases



Matchmaking based on the Semantic Footprint



Services on Top of this Approach



Vocabulary
Management



Semantic
Search



Smart Customer
Support Systems



Linked
Open Data

- **Knowledge Graph (Thesaurus) Publishing**
- **Glossary Services**
- **Semantic Search**
- **Domain Specific Topic Pages**
- **News Aggregation Services**
- **Media Monitoring Services**
- **Recommender Services**
- **Personalization Services**
- **Matchmaking Services**



Analytics & Visualization



Concept Tagging



Recommender System



Data Integration



Taxonomy & Thesaurus
Management



Semantic Search

ANNOUNCEMENT



Vocabularies as a Service **Webinar: 15.10.2015, 16:00pm CET** <http://bit.ly/vocabularies-as-a-service>

Why Vocabulary Management based on SKOS standard should be a cornerstone of your Information Strategy.

Target Groups: Information Architects, Content Strategists, Taxonomists, Data Scientists

Agenda:

4:00pm - **Antoine Isaac** (Vrije Universiteit Amsterdam & Europeana): SKOS - An Overview

4:20pm - **Jan Voskuil** (Taxonic): Why SKOS has become an obligatory standard in the Netherlands

4:40pm - **Martin Kaltenböck & Andreas Blumauer** (Semantic Web Company):
SKOS - Some Use Cases



Thank you.

Eelco Kruizinga, Eelco.Kruizinga@dnvgl.com Knowledge
Management Group, DNV GL

Martin Kaltenböck, m.kaltenboeck@semantic-web.at
Managing Partner & CFO, Semantic Web Company